



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/398,307	09/20/1999	SHAWN W. HOGBERG	IRI03778	9914

7590

10/24/2002

VINCENT B INGRASSIA  
MOTOROLA INC INTELLECTUAL PROPERTY DEPT  
SUITE R3108  
P O BOX 10219  
SCOTTSDALE, AZ 852710219

EXAMINER

RAMOS FELICIANO, ELISEO

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 10/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/398,307**

Applicant(s)  
**HOGBERG et al.**

Examiner  
**ELISEO RAMOS-FELICIANO**

Art Unit  
**2682**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 24, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12, 14-17, and 19-25 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 14-17, and 19-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 2682

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-10, 12, 14-17, and 19-25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Natarajan et al. (U.S. Patent Number 5,749,044) in view of Gudmundson (US Patent Number 5,341,397).

Regarding **claims 1, 4-5, 7, 10, 12, 14, 16-17, and 21**, Natarajan et al. discloses a system and a method for managing and allocating channels in a wireless communication system, see title and abstract. The frequency spectrum, frequency band, or bandwidth is divided (segmented) in "pool of channels" (sub-band), i.e. groups of channels; wherein each "pool" (sub-band) is assigned to a different cell, see Figure 3, step 110, column 1, lines 14-37, and column 6, lines 23-25. Channels are allocated to each one of the cells based on a transmitting power (transmit power level) of a cell, see column 7, lines 46-59. The received power (power level of a received signal) is evaluated (measured) for the purpose of allocating the channels, *inter alia*, see column 6, lines 1-5. The channels could be FDMA, TDMA, CDMA or a combination (at least two different multiple access methods as claimed) thereof, see column 3, lines 10-17.

Art Unit: 2682

Natarajan et al. further discloses that the wireless communication system includes a satellite communication system (10) with satellites (20) ground stations (40) and subscribers (30), see Figure 1, and column 2, lines 4-67. The satellites orbit around a primary body and a constellation of satellites form footprint regions as claimed.

Since Natarajan et al. teaches that the allocation of channels is dynamic, it is understood that it includes means for assigning new channels as claimed in the basis of a change in the power condition, see title, column 1, lines 6-11, *inter alia*.

However, Natarajan et al. fails to specify that different cells may have different power ranges as claimed.

Gudmundson discloses “A Code Division Multiple Access (CDMA) communication system which allocates different sets of frequencies to cells with different transmission power levels. Based upon the transmission power levels of a base station for each cell, each base station is assigned to one of at least two groups of base stations. Each group of base stations is assigned a set of frequencies for traffic communication. The set of frequencies assigned to one group of base stations does not overlap with the set of frequencies assigned to a different group of base stations.” — Abstract (emphasis added).

Gudmundson's invention uses CDMA. The frequency spectrum, frequency band, or bandwidth is divided in “sets of frequencies” (frequency sub-bands or channel groups). The sets of frequencies (sub-bands) are allocated to cells or base stations with different transmission power levels (power range). One assigned set of frequencies does not overlap another. Therefore, at

Art Unit: 2682

least two frequency sub-bands are assigned power ranges that are different from one another, as claimed.

The reason for which cells or base stations may have different transmission power levels (power ranges) is the geographical location of the cells or base stations. For example, rural cell 20 contains rural base station 22, and urban cell 24 contains urban base station 26, as depicted in Figure 2. Rural and urban base stations have different power levels (power ranges), as disclosed at column 3, lines 14-33.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Natarajan et al. and Gudmundson's teachings and/or to enable Natarajan et al.'s invention with cells or base stations with different transmission power levels (ranges) because the geographical location of the cells or base stations can be different, therefore, requiring a different power level (range) as taught by Gudmundson.

Regarding **claims 2-3, 8-9, 15, and 22-25**, Natarajan et al. and Gudmundson disclose everything claimed as applied above (see rejection of *claims 1, 7, 14, and 21*). As explained above, Natarajan et al. teaches that the channels could be FDMA, TDMA, CDMA or a combination thereof, see column 3, lines 10-17. Therefore, at least two different multiple access methods as claimed are taught and implemented by Natarajan et al. For example, a first pool of channels (first sub-band) can include FDMA, TDMA, and/or CDMA channels as claimed, see column 3, line 18 to column 4, lines 28, and Figure 2.

Art Unit: 2682

Regarding **claims 6, and 19-20**, Natarajan et al. and Gudmundson disclose everything claimed as applied above (see rejection of *claims 1, 7, 14, and 21*). As explained above, Natarajan et al. teaches that the wireless communication system 10 is a “space-based mobile telecommunication system” and includes a satellite communication system (10) with satellites (20) ground stations (40) and subscribers (30), see Figure 1, abstract, and column 2, lines 4-67. Satellite 20 could be geostationary, low-earth orbit, medium earth orbit and/or a combination thereof. It may also include a “constellation”; i.e. a number of satellites arranged in orbits for providing specified coverage of a portion, portions or all of earth (footprint regions). Hence, the satellites orbit around a primary body (e.g. the earth) and a constellation or group of satellites form footprint regions as claimed, as taught at column 2, lines 4-13 & 31-43.

#### ***Citation of Pertinent Prior Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

**Sunay et al.** (U.S. Patent Number 5,940,743) see abstract, column 5, lines 1 & 48-67, column 6, lines 1-27, and column 15, lines 30-32.

#### ***Response to Arguments***

4. Applicant's arguments filed on July 24, 2002 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that a

Art Unit: 2682

connection is established prior to the channel assignment step) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The rest of the arguments are drawn to new issues raised by the amendment filed on July 24, 2002. These matters have been treated in the rejection/explanation above.

### ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any response to this Office action should be mailed to:  
Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Art Unit: 2682

or faxed to:

(703) 872-9314

for formal communications intended for entry, informal communications or draft communications; in the case of informal or draft communications, please label "PROPOSED" or "DRAFT".

Hand-delivered responses should be brought to

Crystal Park II  
2121 Crystal Drive  
Arlington, VA  
Sixth Floor (Receptionist).


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eliseo Ramos-Feliciano whose telephone number is (703) 305-0078. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin, can be reached on (703) 308-6739. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700, or call Group customer service at (703) 306-0377.

**ELISEO RAMOS-FELICIANO**  
**PATENT EXAMINER**

ERF/erf  
October 16, 2002.

  
**VIVIAN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**

10/18/02